

**Remarks**

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and following remarks. Claims 1-24 remain pending in the current application. Claims 21-24 have been allowed. Claims 1, 4, 7, 11, 14, and 17 have been amended for reasons not related to patentability. Claims 6-8 and 11-20 have been objected to but have also been indicated as being allowable if rewritten to overcome the objections set forth in the Office Action. Claim 6 is presented in independent form. Objected to claims 7-8 and 11-20 are now in allowable form. Claims 1, 2, 4, 5, and 9 have been rejected under 35 U.S.C. § 102. Claims 1-5 and 9-10 have been rejected under 35 U.S.C. § 103. These rejections are respectfully traversed.

***Claim Objections***

The Office Action objects to each of claims 1, 4, and 7 because of an informality. Although not believed to be required, for reasons of clarity (e.g., "and" has been inserted after "terminal" at the end of the second-to-last element in each claim) and not related to patentability, claims 1, 4, and 7 have been amended as set forth above. Therefore, Applicant respectfully requests that the objections to claims 1, 4, and 7 be removed.

The Office Action objects to each of claims 11, 14, and 17 because of an informality. Although not believed to be required, for reasons of clarity (e.g., "and" has been inserted after "code" at the end of the second-to-last element in each claim) and not related to patentability, claims 11, 14, and 17 have been amended as set forth above. Therefore, Applicant respectfully requests that the objections to claims 11, 14, and 17 be removed.

*Applied Art*

U.S. Patent Application Publication No. 2003/0097567 to Terao et al. (hereinafter "Terao"), entitled "DEVICE AND METHOD FOR AUTHENTICATING USER'S ACCESS RIGHTS TO RESOURCES."

U.S. Patent No. 5,644,118 to Hayashida (hereinafter "Hayashida"), entitled "ELECTRONIC CASHLESS SYSTEM."

U.S. Patent No. 5,793,302 to Stambler (hereinafter "Stambler"), entitled "METHOD FOR SECURING INFORMATION RELEVANT TO A TRANSACTION."

U.S. Patent No. 6,151,395 to Harkins (hereinafter "Harkins"), entitled "SYSTEM AND METHOD FOR REGENERATING SECRET KEYS IN DIFFIE-HELLMAN COMMUNICATION SESSIONS."

*Patentability of Claims 1, 2, 4, 5, and 9 over Terao under § 102(e)*

The Action rejects claims 1, 2, 4, 5, and 9 under 35 U.S.C. § 102(e) as being anticipated by Terao. Applicants respectfully submit that the claims in their present form are allowable over Terao. For a 102(e) rejection to be proper, Terao must show each and every element as set forth in a claim. (See MPEP § 2131.01.) However, Terao does not do so.

*Claim 1*

Independent claim 1 is directed to a method for authenticating a first terminal to a second terminal, and recites in part: "obtaining the requested string from the second terminal" and "merging the obtained string with a password to create an identification code" (emphasis added).

Terao fails to teach or suggest a method of authenticating a first terminal to a second terminal that comprises obtaining the requested string from the second terminal and merging the

obtained string with a password to create an identification code. In its rejection of independent claim 1, the Action relies on various passages in Terao; however, these passages are understood to describe a scenario involving the starting up of a proof data verification device, not "obtaining the requested string from the second terminal" and "merging the obtained string with a password to create an identification code," as recited in independent claim 1. For example, the Action relies upon Terao at paragraph [0137]. During its discussion of the starting up of a proof data verification device, Terao states:

The proof data verification device 10 on the server is started upon **request for opening of communication** to the server which request is made by the communication program in accordance with a predetermined procedure (emphasis added).

Thus, Terao does describe a device that requests the opening of communication; however, Terao fails to describe any type of request for a string. Since there is no request for a string, Terao fails to teach or suggest "obtaining the requested string from the second terminal," much less "merging the obtained string with a password to create an identification code," as recited in independent claim 1.

Alternatively, for sake of argument, Terao still fails to teach or suggest a method of authenticating a first terminal to a second terminal that comprises obtaining the requested string from the second terminal and merging the obtained string with a password to create an identification code, even if the authentication data  $m$  is construed as a string. For example, Terao states in paragraph [0139]:

The proof data verification device 10 generates authentication data  $m$  and **stores** it in the authentication data memory unit 104 (emphasis added).

Terao states in paragraph [0140], as noted in the Office Action:

Further, the authentication data  $m$  . . . [is] **stored** in the authentication data memory unit 111 included in the proof data generation device 11 (emphasis added).

Thus, because the authentication data m is already stored in both devices, there is no need for a request for authentication data m by either device. Consequently, Terao is understood to describe no request by either device for authentication information m. Since authentication information m is never requested, it cannot be construed as a requested string. Therefore, Terao fails to teach or suggest a method for authenticating a first terminal to a second terminal requiring: "obtaining the requested string from the second terminal" and "merging the obtained string with a password to create an identification code," as recited in independent claim 1.

Since the cited reference fails to describe at least one element recited in independent claim 1, Applicants believe the claim is not subject to a 102(e) rejection and request the rejection be withdrawn.

Thus, independent claim 1 and its dependent claims 2, 3, and 5 are allowable over the cited art. Dependent claims 2, 3, and 5 are also independently patentable.

*Claim 4*

Independent claim 4 is directed to a method for authenticating a first terminal to a second terminal, and recites in part: "obtaining the requested string from the second terminal" and "merging the obtained string with a password to create an identification code" (emphasis added).

Terao fails to teach or suggest a method of authenticating a first terminal to a second terminal that comprises obtaining the requested string from the second terminal and merging the obtained string with a password to create an identification code. In its rejection of independent claim 4, the Action relies on various passages in Terao; however, these passages are understood to describe a scenario involving the starting up of a proof data verification device, not "obtaining the requested string from the second terminal" and "merging the obtained string with a password

to create an identification code," as recited in independent claim 4. For example, the Action relies upon Terao at paragraph [0137]. During its discussion of the starting up of a proof data verification device, Terao states:

The proof data verification device 10 on the server is started upon **request for opening of communication** to the server which request is made by the communication program in accordance with a predetermined procedure (emphasis added).

Thus, Terao does describe a device that requests the opening of communication; however, Terao fails to describe any type of request for a string. Since there is no request for a string, Terao fails to teach or suggest "obtaining the requested string from the second terminal," much less "merging the obtained string with a password to create an identification code," as recited in independent claim 4.

Alternatively, for sake of argument, Terao still fails to teach or suggest a method of authenticating a first terminal to a second terminal that comprises obtaining the requested string from the second terminal and merging the obtained string with a password to create an identification code, even if the authentication data m is construed as a string. For example, Terao states in paragraph [0139]:

The proof data verification device 10 generates authentication data m and **stores it** in the authentication data memory unit 104 (emphasis added).

Terao states in paragraph [0140], as noted in the Office Action:

Further, the authentication data m . . . [is] **stored** in the authentication data memory unit 111 included in the proof data generation device 11 (emphasis added).

Thus, because the authentication data m is already stored in both devices, there is no need for a request for authentication data m by either device. Consequently, Terao is understood to describe no request by either device for authentication information m. Since authentication information m is never requested, it cannot be construed as a requested string. Therefore, Terao

fails to teach or suggest a method for authenticating a first terminal to a second terminal requiring: "obtaining the requested string from the second terminal" and "merging the obtained string with a password to create an identification code," as recited in independent claim 4.

Since the cited reference fails to describe at least one element recited in independent claim 4, Applicants believe the claim is not subject to a 102(e) rejection and request the rejection be withdrawn.

Thus, independent claim 4 and its dependent claim 9 are allowable over the cited art. Dependent claim 9 is also independently patentable.

***Patentability of Claims 1, 2, 4, 5, and 9 over Terao in view of Hayashida under § 103***

The Action alternatively rejects claims 1, 2, 4, 5, and 9 under U.S.C. § 103(a) as being obvious over Terao in view of Hayashida. Applicants respectfully submit that the claims in their present form are allowable over the cited art. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. (See MPEP § 2142.)

Motivations to combine or modify references must come from the references themselves or be within the body of knowledge in the art. (See MPEP § 2143.01.)

*Claim 1*

Independent claim 1 is directed to a method for authenticating a first terminal to a second terminal, and recites in part: "obtaining the requested string from the second terminal" and "merging the obtained string with a password to create an identification code" (emphasis added).

Terao fails to teach or suggest "obtaining the requested string from the second terminal" and "merging the obtained string with a password to create an identification code," as discussed above.

Hayashida similarly fails to teach or suggest "obtaining the requested string from the second terminal" and "merging the obtained string with a password to create an identification code," as recited in independent claim 1. As the Action notes, Hayashida does describe the use of personal identification codes for validation purposes; however, Hayashida is understood to disclose nothing with respect to merging an obtained string with a password. For example, the Action relies upon Hayashida at col. 10. During its discussion of personal information codes, Hayashida states at col. 10, lines 35-49:

When the personal identification code is inputted, the ATM terminal unit 2 **sends** the transaction kind, the deposit account number and personal identification code **to the bank center device 3** using a line controlling unit (step 734) and asks for a validity check. The ATM terminal unit 2 stands by for the check processing by the bank center device 3 (step 735), and **judges whether the check result is normal** or not . . . If the ATM terminal unit 2 **judges the personal identification code to be valid**, the ATM terminal unit 2 instructs the owner to input the amount he wants to replenish to the cashless medium 1 (step 737). (emphasis added).

Thus, the system described in Hayashida is understood to describe the unilateral passing of information (e.g., a personal identification code) from an ATM terminal unit to a bank center device, not the requesting of a string to be merged with a password to create an identification code. Even, for the sake of argument, if a check result is construed as a requested string, Hayashida is understood to disclose nothing related to the merging of an obtained string with a

password. For example, the ATM terminal unit merely judges whether the check result is normal – it does not merge the check result with anything, much less a password. As understood, the check result in Hayashida merely serves to indicate to the ATM terminal unit whether the submitted personal identification code is valid and, once that purpose is accomplished, it is no longer used for anything. Further, Hayashida is understood to disclose nothing related to merging the check result with anything to create an identification code. Therefore, Hayashida fails to cure the deficiencies of Terao because it fails to teach or suggest "obtaining the requested string from the second terminal" and "merging the obtained string with a password to create an identification code," as recited in independent claim 1.

Since the cited references, both alone and in combination, fail to teach or suggest the combination of elements recited in independent claim 1, Applicants believe the claim is not subject to a 103(a) rejection and request the rejection be withdrawn.

Thus, independent claim 1 and its dependent claims 2, 3, and 5 are allowable over the cited art. Dependent claims 2, 3, and 5 are also independently patentable.

*Claim 4*

Independent claim 4 is directed to a method for authenticating a first terminal to a second terminal, and recites in part: "obtaining the requested string from the second terminal" and "merging the obtained string with a password to create an identification code" (emphasis added).

Terao fails to teach or suggest "obtaining the requested string from the second terminal" and "merging the obtained string with a password to create an identification code," as discussed above.

Hayashida similarly fails to teach or suggest "obtaining the requested string from the second terminal" and "merging the obtained string with a password to create an identification code," as recited in independent claim 4. As the Action notes, Hayashida does describe the use of personal identification codes for validation purposes; however, Hayashida is understood to disclose nothing with respect to merging an obtained string with a password. For example, the Action relies upon Hayashida at col. 10. During its discussion of personal information codes, Hayashida states at col. 10, lines 35-49:

When the personal identification code is inputted, the ATM terminal unit 2 **sends** the transaction kind, the deposit account number and personal identification code to the bank center device 3 using a line controlling unit (step 734) and asks for a validity check. The ATM terminal unit 2 stands by for the check processing by the bank center device 3 (step 735), and **judges whether the check result is normal or not . . .** If the ATM terminal unit 2 **judges the personal identification code to be valid**, the ATM terminal unit 2 instructs the owner to input the amount he wants to replenish to the cashless medium 1 (step 737). (emphasis added).

Thus, the system described in Hayashida is understood to describe the unilateral passing of information (e.g., a personal identification code) from an ATM terminal unit to a bank center device, not the requesting of a string to be merged with a password to create an identification code. Even, for the sake of argument, if a check result is construed as a requested string, Hayashida is understood to disclose nothing related to the merging of an obtained string with a password. For example, the ATM terminal unit merely judges whether the check result is normal – it does not merge the check result with anything, much less a password. As understood, the check result in Hayashida merely serves to indicate to the ATM terminal unit whether the submitted personal identification code is valid and, once that purpose is accomplished, it is no longer used for anything. Further, Hayashida is understood to disclose nothing related to merging the check result with anything to create an identification code. Therefore, Hayashida fails to cure the deficiencies of Terao because it fails to teach or suggest

"obtaining the requested string from the second terminal" and "merging the obtained string with a password to create an identification code," as recited in independent claim 4.

Since the cited references, both alone and in combination, fail to teach or suggest the combination of elements recited in independent claim 4, Applicants believe the claim is not subject to a 103(a) rejection and request the rejection be withdrawn.

Thus, independent claim 4 and its dependent claim 9 are allowable over the cited art. Dependent claim 9 is also independently patentable.

***Patentability of Claim 3 over Terao in view of Hayashida and further in view of Stambler  
under § 103***

The Action rejects claim 3 under U.S.C. § 103(a) as being obvious over Terao in view of Hayashida and further in view of Stambler.

Dependent claim 3 depends directly from independent claim 1 and is allowable for at least the reasons recited above in support of its parent claim 1. It is also independently patentable. Accordingly, the 35 U.S.C. § 103(a) rejection of claim 3 should be withdrawn. Neither Hayashida nor Stambler cure the deficiencies of Terao.

***Patentability of Claim 10 over Terao in view of Hayashida and further in view of Harkins  
under § 103***

The Action rejects claim 10 under U.S.C. § 103(a) as being obvious over Terao in view of Hayashida and further in view of Harkins.

Dependent claim 10 depends directly from independent claim 1 and is allowable for at least the reasons recited above in support of its parent claim 1. It is also independently

patentable. Accordingly, the 35 U.S.C. § 103(a) rejection of claim 10 should be withdrawn.

Neither Hayashida nor Harkins cure the deficiencies of Terao.

***Comments on the Statement of Reasons for the Indication of Allowable Subject Matter***

Applicants thank the Examiner for indicating allowable subject matter in claims 6-8 and 11-20. To the extent that the statement of reasons for indication of allowable subject matter uses language not identically appearing in the claims, Applicants note that none of claims 6-8 and 11-20 are limited by such language and that the actual language of each claim speaks for itself.

***Comments on the Statement of Reasons for Allowance***

Applicants thank the Examiner for allowance of claims 21-24. To the extent that the statement of reasons for allowance uses language not identically appearing in the claims, Applicants note that none of claims 21-24 are limited by such language and that the actual language of each claim speaks for itself.

***Request for Interview***

If any issues remain, the Examiner is formally requested to contact the undersigned attorney prior to issuance of the next Office Action in order to arrange a telephonic interview. It is believed that a brief discussion of the merits of the present application may expedite prosecution. Applicants submit the foregoing formal Amendment so that the Examiner may fully evaluate Applicants' position, thereby enabling the interview to be more focused.

This request is being submitted under MPEP § 713.01, which indicates that an interview may be arranged in advance by a written request.

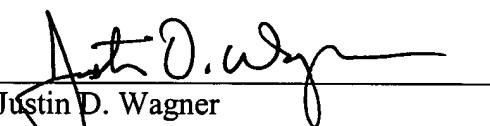
*Conclusion*

The claims in their present form should now be allowable. Such action is respectfully requested.

Respectfully submitted,

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